

**TWO NEW FERN-FEEDING SAWFLIES OF THE GENUS *ANEUGMENUS*  
HARTIG (HYMENOPTERA: TENTHREDINIDAE) FROM SOUTH AMERICA**

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*Abstract.*—*Aneugmenus merida*, n. sp., from Venezuela and Ecuador and *A. colombia*, n. sp., from Colombia are described. *Aneugmenus merida* was reared from larvae feeding on bracken fern, *Pteridium aquilinum* (L.) Kuhn. in Venezuela. These are the only two species of this Holarctic genus known from South America. The species are illustrated and separated from other New World species of *Aneugmenus*. *Aneugmenus leucopoda* (Cameron 1883) is a **new combination**.

*Key Words:* Selandriinae, ferns, Venezuela, Colombia

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Species of *Aneugmenus* Hartig are rather stout sawflies, around 6 mm in length, and are mostly black with contrasting yellow legs. They are distinguished from other New World selandriine genera by the absence of the anal crossvein in the forewing, the presence of an epicnemium as a flat sclerite separated from the mesepisternum by a suture, a genal carina at least partially developed on the sides of the head, a circular carina on the frons, a flat clypeus with the anterior margin tuncate, a sessile anal cell of the hind wing, and bifid tarsal claws with a distinct basal lobe.

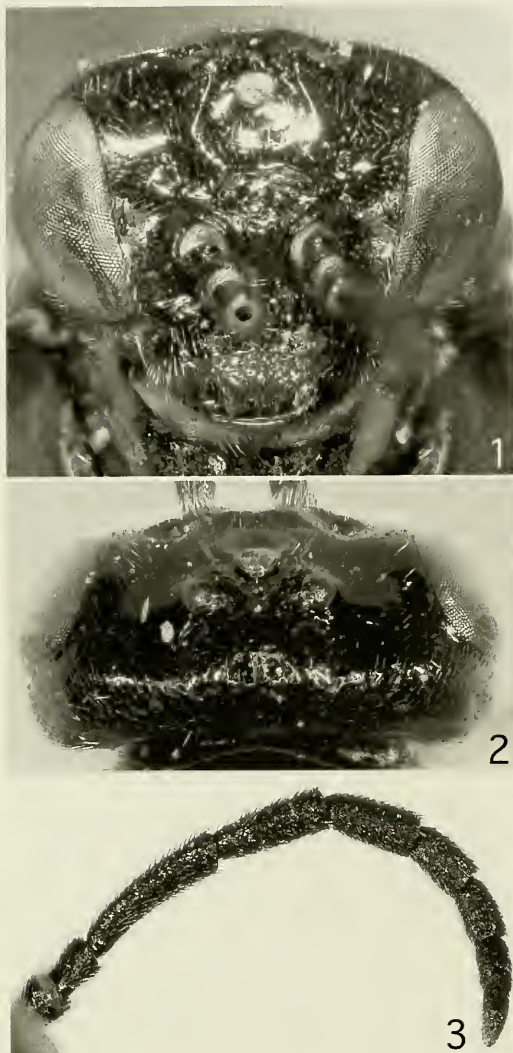
Smith (1969) revised the Nearctic species of *Aneugmenus* and included three species. It was later determined that *A. floridella* Ross 1930 was distinct; thus, four species are listed in the North American catalog (Smith 1979). Other than *A. scutellatus* Smith 1969 from southern Arizona and northern Mexico, only two species have been described from the Neotropics, *A. nigritarsis* Rohwer 1911 from Mexico and *A. leucopoda* (Cameron 1883) from Guatemala. There are, however, a num-

ber of undescribed species from Mexico and Central America.

One of the species treated here was reared from *Pteridium aquilinum* (L.) Kuhn. in Venezuela by Daniel Otero and Maria Pia Calcagno, Universidad de Los Andes, Mérida, Venezuela, who are working on its life cycle, feeding habits, and ecology. The reared adults proved to be a new species of *Aneugmenus* Hartig. Identity of this species prompted this review of the South American species of *Aneugmenus*, and, because I am aware of only one other species in South America, a new species from Colombia also is described. Colombia, Ecuador, and Venezuela are the southernmost records for *Aneugmenus* in the Western Hemisphere.

***Aneugmenus merida* Smith, new species**  
(Figs. 1–7)

Female.—Length, 6.0 mm. Antenna and head black. Thorax black with tegula and posterior margin of pronotum yellow. Legs yellow with coxae and trochanters black



Figs. 1–3. *Aneugmenus merida*, female. 1, Head, front view. 2, Head, dorsal view. 3, Antenna.

and tarsi blackish. Abdomen orange with basal plates, anterior margin of second segment, and apical 2 to 3 segments and sheath black. Wings moderately uniformly infuscated; veins and stigma black.

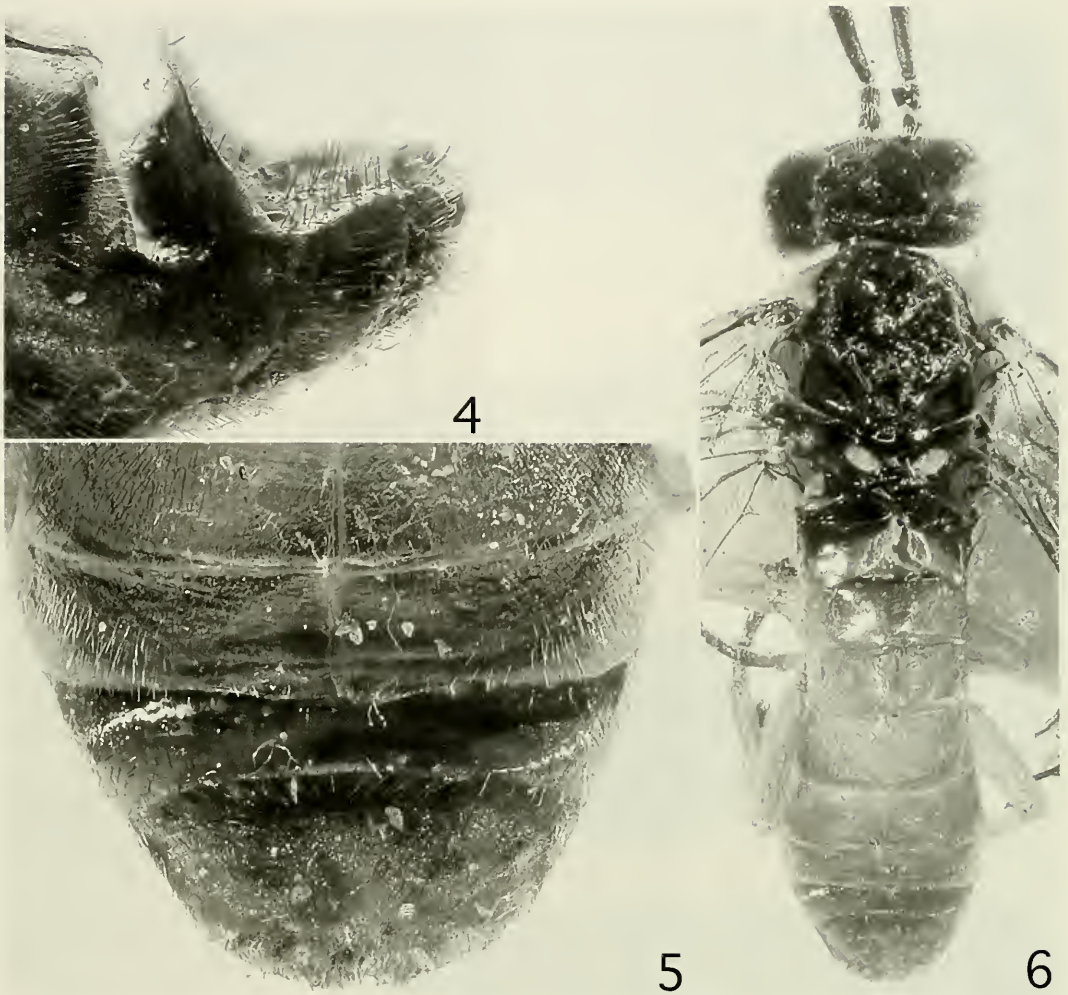
Antennal length  $1.3\times$  head width; 1st segment broader than long; 2nd segment longer than broad; 3rd segment longer than 4th segment (Fig. 3). Clypeus truncate. Malar space linear. Head in front view (Fig. 1) with eyes strongly converging below; lower interocular distance slightly shorter than

eye length, upper interocular distance  $1.4\times$  eye length. Genal carina present laterally, absent near top of eye, on head above, and behind postocellar area. Head in dorsal view straight behind eyes; distances from eye to lateral ocellus, between lateral ocelli, and from lateral ocellus to hind margin of head as 1.0:1.0:0.7. Postocellar area about  $2.0\times$  broader than long. Epicnemium present as a flat sclerite separated from mesepisternum by a suture. Forewing with 4 cubital cells. Hind wing with anal cell sessile. Hind basitarsus  $0.8\times$  length of remaining tarsal segments combined. Tarsal claws with inner tooth and basal lobe. Sheath short and rounded in lateral view. Lancet (Fig. 7) with 5 serrulae, 7 broad alar spines with basal two small and near ventral margin; apex truncate.

Male.—Length, 6.0 mm. Color similar to female, with abdomen mostly orange (Fig. 6) except for blackish anterior margin to anterior half of basal plates and entire hyandrium. Seventh tergum with a deep groove (sinus sexualis) and 8th tergite with broad, slightly concave roughened area (Figs. 4–5). Genitalia (Figs. 11–12) with harpe curved inward and apex almost truncate; parapenis long, narrow, gradually tapering to narrow rounded apex; penis valve nearly rectangular, apex broadly rounded.

Types.—Holotype: ♀ labeled “Cerro La Bandera, La Hechicera, Mérida, 2,100 m, Edo. Merida, Venezuela,” “Julio/2003, J. L. Avila leg.” Deposited in Instituto de Zoología Agrícola, Universidad Central de Venezuela, Maracay, Venezuela.

Paratypes: ECUADOR: Baños, Tungurahua, 1,820 m, II-11-55, E. I. Schlinger, E. S. Ross, collectors (1 ♀). VENEZUELA: Same data as for holotype (1 ♀, 1 ♂); La Hechicera, 1900–2100 m, Mérida, Edo Mérida, Octubre/2003, J. L. Avila, 2 ♂ reared from oviposition of field collected females, 1 ♀ field collected (1 ♀, 2 ♂); Mérida; Los Pedregosa, in hills near Merida, 16 March 1982, G. F. & J. F. Hevel (1 ♀, 1 ♂); Merida, Timotes, 1 June 1976, A.S. Menke & D. Vincent (1 ♀). The paratype from Ec-



Figs. 4–6. *Aneugmenus merida*, male. 4, Apex of abdomen, lateral view, showing sinus sexualis in seventh tergite. 5, Apex of abdomen, dorsal view. 6, Dorsal view.

uador is deposited in the California Academy of Sciences, San Francisco; paratypes from Venezuela are in the Facultad de Ciencias, Universidad de Los Andes, Mérida, Venezuela, and the National Museum of Natural History, Smithsonian Institution, Washington, DC.

Two larvae also associated with the “October/2003” collection are not paratypes.

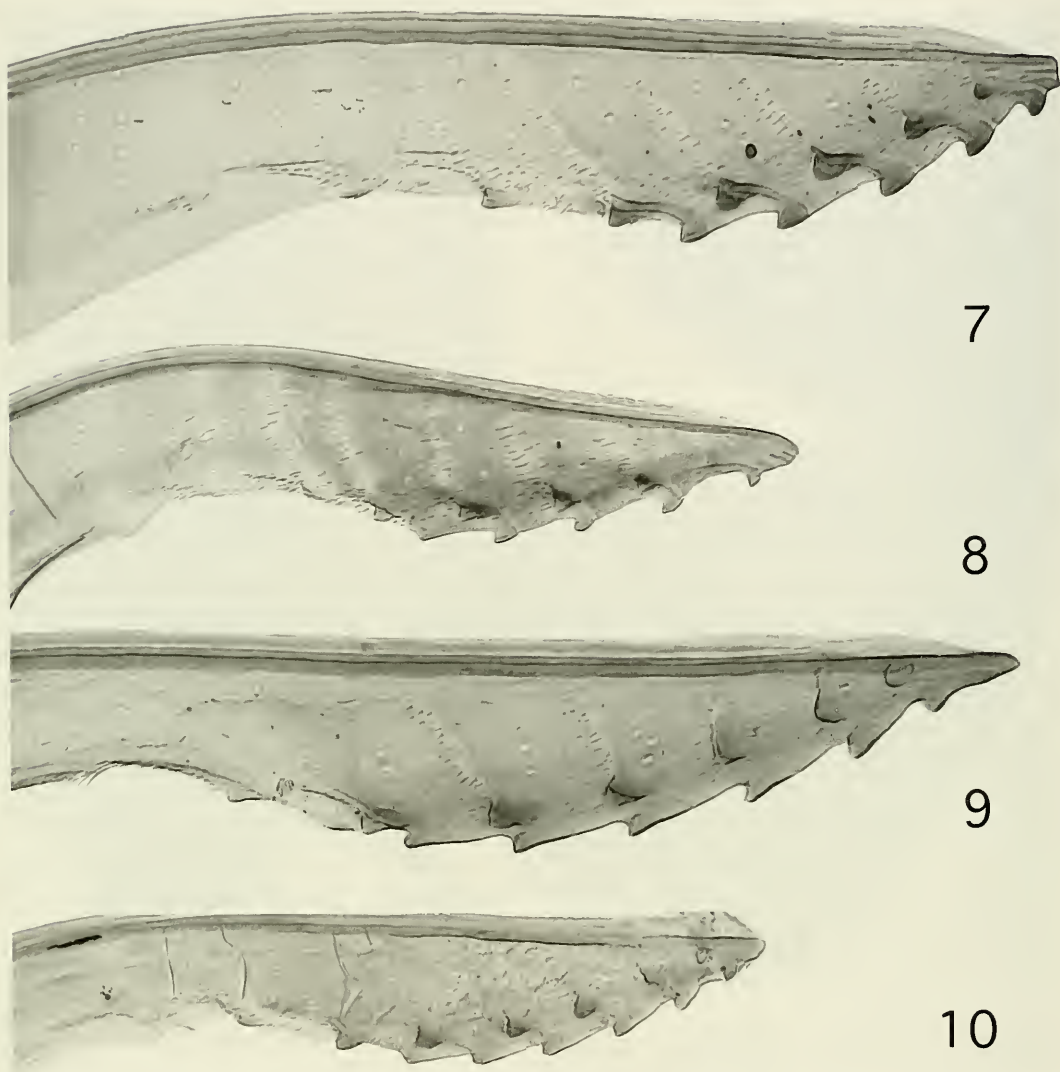
Food plant.—Larvae feed on fronds of bracken fern, *Pteridium aquilinum* (L.) Kuhn.

Etymology.—The name is from the type locality and is a noun in apposition.

Discussion.—This is the only known species of *Aneugmenus* with a mostly orange abdomen in both sexes. Some other species have the abdomen partly orange only in the male, but in all others the female abdomen is entirely black.

Three described species are known south of the United States: *A. leucopodus* from Guatemala, *A. nigritarsis* from Mexico, and *A. scutellatus* from southern Arizona and northern Mexico.

*Aneugmenus leucopoda* has the antenna and head black; the thorax black with the tegula, posterior margin of the pronotum,



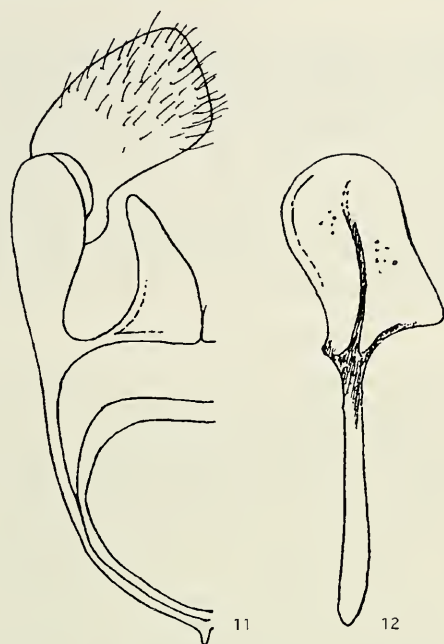
Figs. 7-10. Female lancets. 7, *Aneugmenus merida*. 8, *A. nigritarsis*, holotype. 9, *A. scutellaris*. 10, *A. colombia*.

and spot on the lower posterior margin of the mesepisternum yellow; the legs except the coxae and trochanters yellow; and the abdomen black with the extreme apices of the segments beneath broadly white.

*Aneugmenus leucopoda* (Cameron 1883) is a **new combination**. Cameron described a female as *Selandria leucopoda* from "Guatemala, San Gerónimo." Rohwer (1912) later transferred it to *Proselandria* Forsius. I examined the holotype, housed in The Natural

History Museum, London, BM #1.265, labeled "S. Geronimo, Guatemala, Champion" and with name labels. It is a typical *Aneugmenus*. The male is unknown.

*Aneugmenus nigritarsis* was described from "San Rafael, Jicoltepec, Mexico." The holotype, in the National Museum of Natural History, Smithsonian Institution, was examined. I have also seen specimens from the Mexican states of Puebla and San Luis Potosi. This species is black with the



Figs. 11–12. *Aneugmenus merida*, male genitalia. 11, Genital capsule, ventral view of left half. 12, Penis valve, lateral view.

labrum, tegula, posterior margin of the pronotum, legs below the bases of the coxae yellow, and the apex of the clypeus brownish. The female lancet of *A. nigritarsis* is short, with 5 serrulae and only 4–5 distinct alar spines (Fig. 8). The serrulae are narrow and far apart, and the apex of the lancet is rounded. The male is unknown.

*Aneugmenus scutellatus* is black with the labrum and palpi white; tegula, posterior angles of the pronotum and mesoscutellum white to yellow; legs except coxae yellow; and the abdomen black. The lancet has 6 serrulae and 6–7 alar spines (Fig. 9) and the apex is rounded. In the male, tergites 2–6 are reddish and sternites 1–3 are yellowish, and the genitalia (Smith 1969, figs. 112–113) have the harpe straighter, not nearly as curved inward as in *A. merida*, and the penis valve has a narrow dorsal lobe.

Three other species occur in North America. *Aneugmenus flavipes* (Norton 1861) in eastern Canada and United States, *A. floridella* Ross 1930 in Florida, and *A.*

*padi* (Linnaeus 1761) an introduced Palearctic species in western Canada and northwestern United States. All are black with the tegula, posterior margin of the pronotum, and legs yellow. Occasional specimens of *A. flavipes* and *A. floridella* have the clypeus partly yellowish, and males of *A. floridella* have the abdominal dorsum partly or mostly orange. *Pteridium aquilinum* is a recorded food plant for *A. flavipes* and *A. padi* (Smith 1969).

The larva of *A. merida* is typical for species of *Aneugmenus*. The abdominal segments are 7-annulate; prolegs are present on abdominal segments 2–8 and 10; the body is whitish (preserved specimens, probably green when alive) without ornamentation and with only the spiracles and tarsal claws dark brown; the head is pale without dark markings except black eyespots, antennal segments, narrow line on the clypeal suture, and mandible apices; and the prothorax has a pair of fleshy protuberances just behind the head capsule. The larva is very similar to that of *A. flavipes*.

The male possesses the unusual concavity (sinus sexualis) on the seventh tergum (Figs. 4–5) that appears typical for male *Aneugmenus*. This structure is present in *A. flavipes* and most other species of the genus. Smith and Marshall (2003) reported on and gave photos of the female apparently gaining some nutritional substance from this structure before and/or after mating. *Aneugmenus merida* appears to have a similar courtship behavior, which is under investigation by Daniel Otero and Maria Pia Calcagno.

*Aneugmenus colombia* Smith,  
new species  
(Fig. 10)

Female.—Length, 5.5 mm. Black with labrum white; apex of mandible reddish brown; tegula, posterior angles of pronotum, and femora and tibiae yellow; tarsi blackish, darker apically. Wings uniformly, darkly infuscated; veins and stigma black.

Antennal length 1.2× head width; oth-

erwise similar to Fig. 3. Forewing with first branch of Rs absent, thus with 3 cubital cells. Lancet (Fig. 10) short, dorsoapical margin protuberant, with 6 shallow serrulae and 6–7 alar spines. Other features similar to *A. merida*, Figs. 1–2).

Male.—Unknown.

Holotype.—Female, labeled “COLOMBIA: 5 mi E. Guaduas, Cundinamarca, 1,400 m, III-15-55,” “E.I. Schlinger & E. S. Ross, collectors.” Deposited in the California Academy of Sciences, San Francisco.

Etymology.—Named from the country of collection, a noun in apposition.

Discussion.—The black coloration and short lancet are most similar to *A. nigritar-sis*, but in *A. colombia* the serrulae are shallower and broader, the apical serrulae are closer together, and the dorsoapical margin is protuberant. Examination of the color pattern and lancet are necessary for identification of this species.

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